



THE CITY OF SAN DIEGO

# Natural Resources and Culture Committee Meeting

## Water and Wastewater Rates Presentation

Item 5

Proposed Rate Adjustments  
for Water & Sewer

January 24, 2007

The background of the slide is a solid blue color. On the left side, there is a vertical strip of water ripples, showing concentric circles and wavy lines in shades of blue and white, suggesting a reflection or a close-up of water. The word "WATER" is centered in the middle of the slide in a bold, yellow, sans-serif font.

# WATER

# Water Department\*

- ORGANIZATION

- 914 Employees
- FY2007 Budget \$359 million

- CUSTOMERS

- More than 1.3 million customers
- 403 square mile service area
- 274,000 meters in service

- SYSTEM

- 3 water treatment plants
- 3,460 miles of water lines
- 49 water pumping stations

- RESPONSIBILITY

- Treat and deliver 210 million gallons a day (annual avg.)

\*numbers rounded





# Reasons for Rate Increases

- We must construct new pipelines and upgrade our Water Treatment Plants Comply with Federal Safe Drinking Water Act and the California Department of Health Services (DHS) Compliance Order.
- Replace aging infrastructure to reduce the number of pipeline breaks and emergency repairs
- Increase treatment capacity and improve process technology
- Meet ongoing operational and maintenance (O&M) needs of the water system.

# Department of Health Services

## Mandated Projects

- 💧 Water Main Replacements – Cast Iron
- 💧 Alvarado Water Treatment Plant Phase 4 Ozone
- 💧 Miramar Water Treatment Plant – Contract A
- 💧 Miramar Water Treatment Plant Contract B – Flocculation/Sedimentation Basins
- 💧 Miramar Water Treatment Plant Contract C – Ozone Equip/Install
- 💧 Otay 2nd Pipeline – Cast Iron Replacement Phase
- 💧 Rancho Bernardo Reservoir Rehabilitation
- 💧 Rancho Penasquitos Pump Station

# Department of Health Services

## Related Projects

- 💧 Harbor Drive Cast Iron Pipeline
- 💧 Alvarado Water Treatment Plant Ph 3 Rehab Flocculation/Sed. Basins
- 💧 Alvarado Water Treatment Plant Ph 5 Site work
- 💧 Alvarado Water Treatment Plant – SDFCF 12
- 💧 Miramar Water Treatment Plant SDFCF 24, 25, 26
- 💧 Miramar Water Treatment Plant Contract D – Landscape & Site work
- 💧 Otay Water Treatment Plant Upgrades Phase 1
- 💧 Otay Water – North Encanto Replacement
- 💧 Air Valve Adjustments
- 💧 Lower Otay Reservoir – Emergency Outlet Improvement
- 💧 CIP Program Management
- 💧 Lindbergh Field 16-inch Cast Iron Replacement



# Water System Improvements

## Cast Iron Pipeline Replacement



## Catalina Pump Station Rehabilitation



# Expansion Project Examples

- Water Main Replacements
- Rancho Peñasquitos Pump Station
- SD 17 Flow Control Facility
- Treatment Plant
- Miramar Water Treatment Plant
- El Monte Pipeline No. 2
- El Capitan Pipeline No. 2
- Los Peñasquitos Reclaimed Water Pipeline
- Camino del Sur Reclaimed Water Pipeline
- Groundwater Asset Development Program
- NOTE: Each project is assigned an expansive percentage based on an engineering evaluation of the proportion of the project that represents an increase to system capacity.




# Proposed Water Revenue Increases

2008	2009	2010	2011
6.5%	6.5%	6.5%	6.5%

# Average Monthly Bill

- For Water, Sewer, and Storm Drain



**THE CITY OF SAN DIEGO**  
**WATER & WASTEWATER SERVICES**  
 SAN DIEGO, CA 92187-0001 (619) 515-3500

Mailed on Dec 12 2006

**U01-9999-99-0**  
ACCOUNT NUMBER

**123 MAIN ST**  
SERVICE ADDRESS

**Dec 27 2006**  
PAYMENT DUE DATE

|||||  
**JOHN Q CITIZEN**  
**123 MAIN ST**  
**SAN DIEGO CA 92101-4506**

**RETURN THIS PORTION**  
 MAKE CHECK PAYABLE TO CITY TREASURER

\*This bill will be paid automatically on Dec 27 2006\*

						AUTO PAY	
						TOTAL AMOUNT DUE	
ACCOUNT NO. <b>U01-9999-99-0</b> <b>JOHN Q CITIZEN</b>						<b>Dec 27 2006</b>	
SERVICE ADDRESS <b>123 MAIN ST</b>						<b>\$95.85</b>	
						<b>PAYMENT DUE DATE      TOTAL AMOUNT DUE</b>	
TYPE OF SERVICE	METER	SERVICE PERIOD FROM	TO	DAYS	METER READING PREVIOUS	CURRENT	USAGE HCF*
Water Base Fee		11-06	12-07	31			
Water Used		11-06	12-07	31	1264	1278	14
					7 HCF @ \$1.7310 =		\$12.12
					7 HCF @ \$2.1630 =		\$15.14
Sewer Base Fee		11-06	12-07	31			
Sewer Srvcl Chrg		11-06	12-07	31			
Storm Drain Fee							
						<b>TOTAL AMOUNT DUE</b>	
						<b>\$95.85</b>	



# Single-family Residential Meter Size

- Nearly all single family residences have 3/4-inch meters
- A few, very large homes may have a 1-inch meter by special permit
- This information is not shown on the water bill

# Average Monthly Increase

## Monthly Basis Single Family Residential Cost

	FY 2007	FY 2008		FY 2009		FY 2010		FY 2011	
Low Water User (2 hcf)	\$19.33	+0.37	\$19.70	+1.56	\$20.89	+1.46	\$22.35	+1.45	\$23.80
Moderate Water User (14 hcf)	\$43.13	+5.11	\$48.24	+3.14	\$51.38	+3.34	\$54.72	+3.55	\$58.27
High Water User (25 hcf)	\$69.22	+9.55	\$78.77	+5.12	\$83.89	+5.45	\$89.34	+5.75	\$95.15



# Proposed Projects by Type

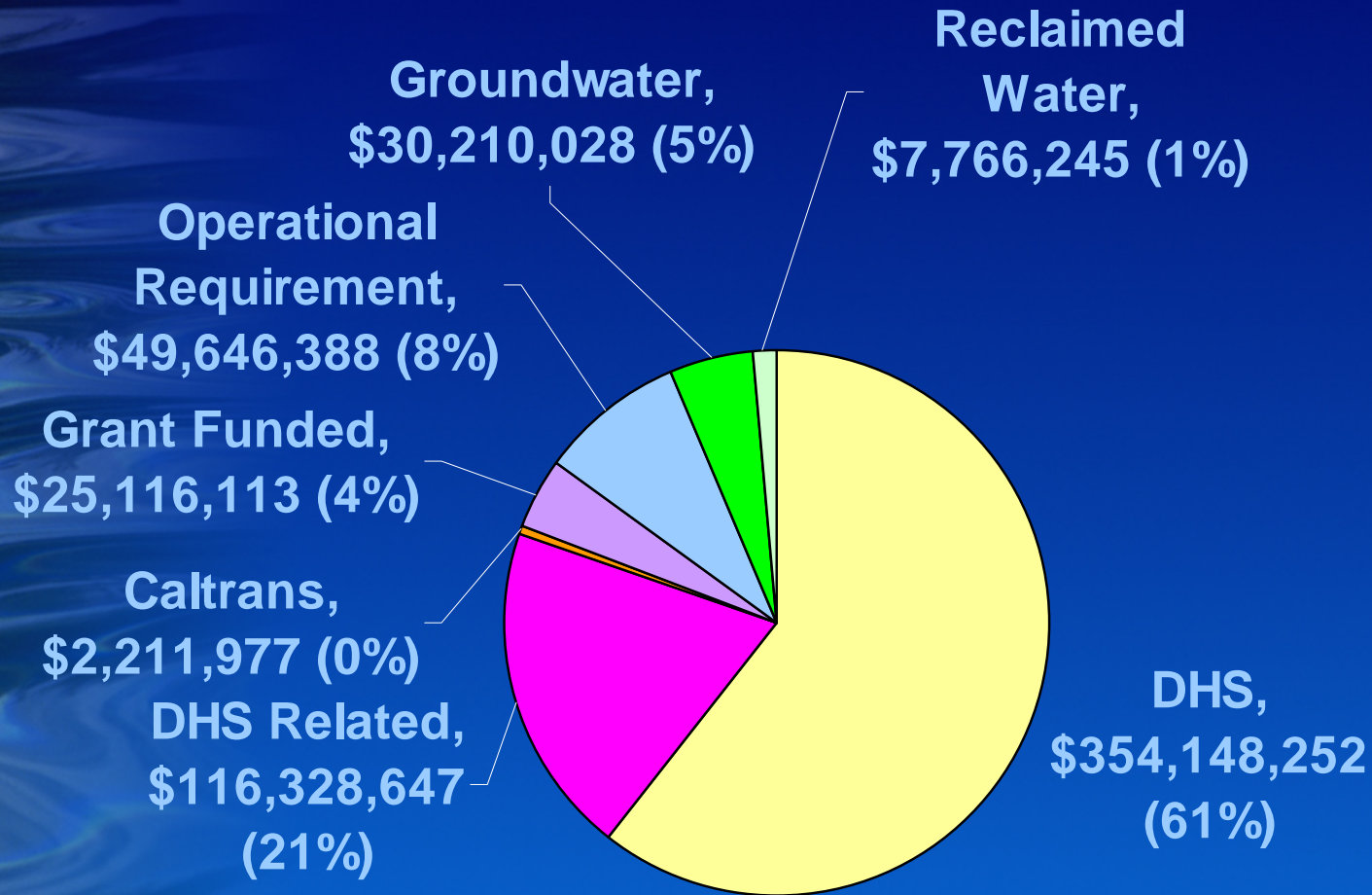
## FY 08 – FY 11

- It is anticipated that the 2008 Water Rate Increases will provide funding for 99 CIP Projects including:
  - EPA and DHS required or related
  - Water Treatment Plants, Pipelines, Reservoirs, & Pump Stations
  - Annual Allocation Project Groups
  - Projects related to growth

\*For complete list of projects see Attachment 1

# CIP Projects

## FY 2008 – 2011 \$585 Million



\*For complete list of projects see Attachment 1



# Anticipated Construction Cost Increases

- 4% yearly inflation – compounded annually
- Source: Engineering News Record (ENR) 10 and 15 year annual averages

The background of the slide features a close-up, artistic shot of water ripples. The ripples are concentric circles of varying sizes, creating a textured, wavy pattern. The colors range from deep blues to lighter, almost white highlights where the ripples catch the light. The overall effect is a sense of movement and fluidity.

# Past Water Rate Increases



# 1997 Rate Increase

- Series of three rate increases approved by the Mayor and City Council on August 12, 1997

Aug. 12, 1997	July 1, 1998	July 1, 1999
6%	6%	6%

# 2002 Rate Increase

- Series of five rate increases approved by the Mayor and City Council on April 30, 2002

July 1, 2002	July 1, 2003	July 1, 2004	July 1, 2005	July 1, 2006
6%	6%	6%	6%	6%

# 2002 Rate Increase: Completed Projects

- 88 water CIP projects were completed since 2002
  - Water Treatment Plants
  - Water Pump Stations
  - Water Storage Reservoirs
  - Pipelines
  - Recycled Water
- 53 projects are DHS Compliance Order related

\*For complete list of projects see Attachment 2



# Cast Iron Mains

- FY 1999 - 14.39 miles
- FY 2000 - 33.15 miles
- FY 2001 - 4.53 miles
- FY 2002 - 16.3 miles
- FY 2003 - 8.16 miles
- FY 2004 - 10.6 miles
- FY 2005 - 1.84 miles
- FY 2006 - 1.14 miles
- FY 2007 - 0.4 miles (to date)
- Total replaced since 1999: 90.5 miles
- 195 miles still to be replaced
- Plan to replace 75 miles FY 2008-2011

# Capital Improvements Program History

- Dec. 1, 2004: Memo from City Manager to Mayor and Council announcing curtailment of Water and Wastewater CIP.
- Dec. 2 and 3, 2004: Memo to Mayor and Council from Deputy City Manager regarding Water and Sewer Project Scheduling
- Dec. 21, 2004: Memo from Deputy City Manager to Mayor and Council with information about which projects funded and total cost of each project.
- Dec. 23, 2004: Letter from Water Department Director to County Department of Health Services Compliance Order and City's funding dilemma.
- Jan. 27, 2005: City Manager's Report on Wastewater and Water CIP Funding Update

The background of the slide features a close-up, artistic shot of water ripples. The ripples are concentric and spread across the left side of the frame, creating a sense of movement. The water has a deep blue hue, and the lighting highlights the texture of the ripples, giving them a shimmering appearance. The right side of the slide is a solid, darker blue, providing a clean backdrop for the title text.

# Wastewater



# Proposed Consent Decree

## Mandated Projects by June 30, 2013

- 250 total miles of Wastewater Pipeline Replacement and Rehabilitation
- 26 miles of Trunk Replacement
- 12 Pump Station Upgrades
- Meet ongoing O&M needs of the wastewater system which includes mandates from the proposed Final Consent Decree
  - Meet CIP pay-go costs of approximately 20% of the \$648 million CIP program

# Proposed Projects

• Pipeline Replacement and Rehabilitation*	\$277 million
• Trunk Sewer Rehabilitation*	\$197 million
• Treatment Plants	\$82 million
• Municipal Sewer Pump Stations*	\$32 million
• Large Sewer Pump Stations	\$15 million
• Other projects, primarily the Metro Facilities Control System Upgrade, Wet Weather Storage Facility, and Annual Allocation – CIP Contingencies	\$45 million
TOTAL	\$648 million

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**\* 73% of CIP funding is directly tied to Consent Decree**

# Sewer Expansion Project Examples

- Sewer Main Replacements
- Sorrento Valley Trunk Sewer Relocation
- South Mission Valley Trunk Sewer
- MBC Centrate Collection Upgrades
- La Jolla/PB Trunk Sewer – Chelsea St. Relocation
- Balboa Trunk Sewer
- Otay Valley Sludge Pipeline
- South Bay Sludge Processing Facilities
- Miramar Road Trunk Sewer
- Vactor Cleanings Disposal Site
- NOTE: Each project is assigned an expansive percentage based on an engineering evaluation of the proportion of the project that represents an increase to system capacity.



# Anticipated Construction Cost Increases

- 4% yearly inflation
  - Does not account for unusual construction cost escalation
  - 4% based on the Engineering News Record Construction Cost Index most recent 10 year annual average and 15 year annual average

# Collection System Work

## *Miles Replaced/Rehab Per Calendar Year*

	CY 00	CY01	CY02	CY03	CY04	CY05	CY06	Total
Total Miles (Rehab and Replace)	17.07	37.49	48.90	44.21	48.32	37.06	21.92	254.97

## *Miles Replaced/Rehab Per Fiscal Year*

	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	Total
Total Miles (Rehab and Replace)	5.31	23.85	48.18	49.93	47.00	40.23	27.87	12.60	254.97

**Total toward Consent Decree target  
(200 miles req'd Jan 2002 - June 2007)**

**200.41**

**Previous Rate Case Objectives Achieved  
But  
No FY06 Rate Increase means no reserve margin  
to meet consent decree requirements**

# 2002-2005 Rate Case

CIP Projects Planned (2002-2005)	\$624M	
CIP Projects Deferred or Cancelled	-\$109M*	
CIP Projects Added	\$ 38M*	
CIP On-going Projects & Construction Contingency	<u>-\$ 77M</u>	
CIP Projects Expended	\$476M	77%
<i>* Primary reason for project change – CCTV results</i>		
1) CIP On-going Projects & Construction Contingency	\$ 77M	} 23%
2) 'PayGo' for 2006/2007 CIP:	\$ 15M	
3) Partial Consent Decree Requirements:		
Funding Shifted to Cleaning Program (Spill Reduction 77%)	\$ 46M	
Funding Shifted to Canyon Program	<u>\$ 10M</u>	
<b>TOTAL</b>	\$624M	



# Completed Projects

66 Sewer CIP projects were completed

- 41 Metropolitan System Projects
  - Includes Metro Biosolids Center and South Bay Water Reclamation Plant
- 25 Municipal Projects\*
  - Includes 14 Trunk Sewers
  - Includes 5 Pump Stations

*\* Excludes pipeline rehabilitation and replacement projects*

# Past and Present Rate Case

2007 Rate Case								
Actual					Projected			
FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10
7.5%	7.5%	7.5%	7.5%	0	8.75%	8.75%	7.0%	7.0%

October 2001 Rate Case								
Projected								
FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10
7.5%	7.5%	7.5%	7.5%	6.5%	5.0%	5.0%	5.0%	5.0%

# Average Wastewater Monthly Bill

## *Sample Single Family Residential Cost on a Monthly Basis*

Based on Water Consumption	Existing 2007	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
Low Water User (4 hcf)	\$22.88	\$23.87	\$25.96	\$27.78	\$29.72
Moderate Water User (9 hcf)	\$37.32	\$38.32	\$41.67	\$44.59	\$47.71
High Water User (18 hcf)	\$51.77	\$64.33	\$69.96	\$74.86	\$80.10

## *Sample Multi-Family Residential Cost on a Monthly Basis*

Based on Water Consumption	Existing 2007	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
Low Water User (55 hcf)	\$215.98	\$234.40	\$254.91	\$272.75	\$291.85
Moderate Water User (500 hcf)	\$1,871.82	\$2,031.31	\$2,209.05	\$2,363.68	\$2,529.14
High Water User (1000 hcf)	\$3,732.32	\$4,050.31	\$4,404.71	\$4,713.04	\$5,042.95



# Average Wastewater Incremental Increase

## *Monthly Basis Single Family Residential Cost*

Based on Water Consumption	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
Low Water User (4 hcf)	\$0.99	\$2.09	\$1.82	\$1.94
Moderate Water User (9 hcf)	\$1.00	\$3.35	\$2.92	\$3.12
High Water User (18 hcf)	\$12.56	\$5.63	\$4.90	\$5.24

## *Monthly Basis Multi-Family Residential Cost*

Based on Water Consumption	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
Low Water User (55 hcf)	\$18.42	\$20.51	\$17.84	\$19.10
Moderate Water User (500 hcf)	\$159.49	\$177.74	\$154.63	\$165.46
High Water User (1000 hcf)	\$317.99	\$354.40	\$308.33	\$329.91

The background of the slide features a deep blue gradient. On the left side, there is a vertical strip of image showing concentric ripples on a water surface, reflecting light in shades of white and light blue. The word "Questions" is centered in the middle of the slide in a bold, yellow, sans-serif font.

# Questions